

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
5 July 2001 (05.07.2001)

PCT

(10) International Publication Number  
**WO 01/48720 A1**

(51) International Patent Classification<sup>7</sup>: G08B 21/00

(74) Agent: BEÉRRE ASSESSORIA EMPRESARIAL S/C LTDA; Av. Barão de Itapura, 3236, CEP-13076-000 Campinas, SP (BR).

(21) International Application Number: PCT/BR00/00104

(22) International Filing Date:  
10 September 2000 (10.09.2000)

(81) Designated States (national): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(25) Filing Language: English

(26) Publication Language: English

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

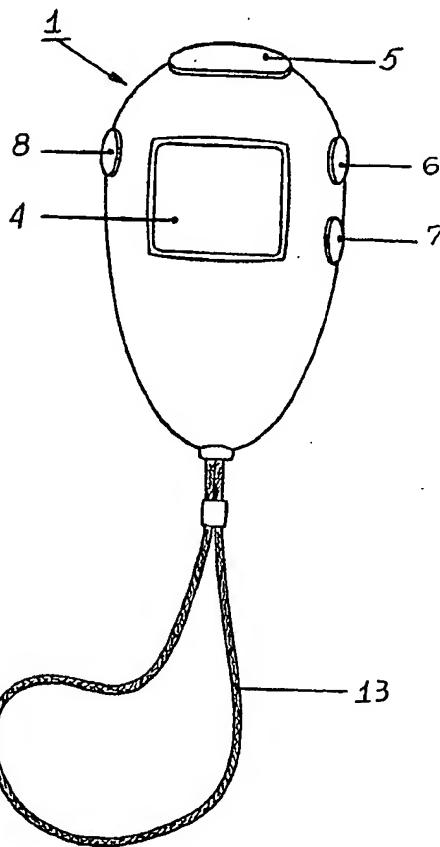
(30) Priority Data:  
PI 9907593-8 23 December 1999 (23.12.1999) BR

(71) Applicant and

(72) Inventor: CORREA DE LACERDA, Josué [BR/BR]; Rua Uirapurus, 211, CEP-14110-000 Ribeirão Preto, SP (BR).

[Continued on next page]

(54) Title: DIGITAL ROSARY



(57) Abstract: The digital rosary (1) has a micro-controlled electronic chip supplied by little button batteries, having inside a recorded program to perform the rosary functions being controlled by intelligent command buttons (5, 6, 7), which one with more than one function, differed by the kind of touch applied the same, being doted with memory to memorize the point its functions is stopped and make it return at any time desired by the user, besides memorize the day its functions were practiced or started, having recourse as auto power off after three minutes on idle, memorizing its last position, sound signals to audible information, alarm signals, vibration, rotate texts, image alternating with texts, Rosary and Third functions and calendar in real time.

WO 01/48720 A1



**Published:**

- *With international search report.*
  - *Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*



## " DIGITAL ROSARY "

The present patent is regard  
the Invention of a Digital Rosary, or Electronic Rosary,  
05- used for counting the orations from the Rosary during  
the period of a religious cult, allowing to the user stop  
the oration any time and then start from the right point of  
this interruption not having to begin from the beginning.

The religion is a belief on  
10- the existing of supernatural power considered as creator  
of the universe and, as such, must be adopted and follo-  
wed, being the manifest of such belief done through the  
dogma or cults, as such as the oration of the Rosary.

In the world we live, with  
15- lots of confusions and disturbances on material order,  
nothing better than the relief of the oration on the Rosary  
to make the love and fraternity grow up among us, hel-  
ping us to overcome the pain and difficulties on our  
days, instilling on us joy and peace.

20- The Rosary is an old way of  
oration, which was developed on the passing year.

The Rosary consist on 15  
Lord's Prayers and Glories and 150 Hails Mary intermi-  
xed by the Contemplation, "Mysteries" from the Christ  
25- and Virgin Mary life's, Jaculation, Litany and Save Queen,  
for being prayed as religious practice.

As the oration of the Rosary  
takes lots of time, the actual catholic tradition adopt the

oration of a third part of the Rosary, usual called as Third, which is done manually by the means of a specific necklace count which are passed by the fingers to count the oration prayed. It is composed by 15 mysteries or ten 05- with little accounts (which one of such correspond to one Hail Mary) being which on of such tens separated by one bigger account, which is equivalent to one Lord's Prayer.

When making the oration of 10- the Third the user must advance the accounts manually and cannot put the fingers, big toe and forefinger off the stop point, or run the risk of lose the sequence, being exactly what generally occurs, mainly when the user is doing the oration and some parallel activity at the same 15- time.

The mainly objective of the Digital Rosary object of the present patent is allow to the user count digitally the Rosary accounts localization and stop the oration at any time, being this way registered on 20- the machine it's last position, and when the oration was started again it is possible begin from the right stopped point.

This way, the user can stop the oration how many times it makes necessary, never 25- losing the counting, it means, the Rosary position.

The oration of the Rosary comprehend various parts, or various steps: Offers; Cred; Homage to the Holiness Trinidad; the Joyfully, Pain-

fully and Glorify Mysteries, shared which on five Contemplation and prayed respectively on Mondays and Thursdays, on Tuesdays and Fridays, on Wednesdays, Saturdays and Sundays; Gratefulness; and Save Queen.

05- The refereed Digital Rosary consist basically on one electronic chip micro-controlled which have inside a written program of the Rosary.

The control of the machine is done by intelligent buttons of command with more than 10- one function to the same button, differing by the kind of touch, be a quick touch, long touch, two or more touches, or even with association to another button.

The information will be visual, showed up on a graphic display on text format and 15- images, or sensitive by the mechanic vibrations, also can be audible by the speakers or headphones on the machine, this way the user both can learn to pray or just control the pray.

The source of the machine is 20- a small battery (button kind) installed on the inferior box.

All this things are on a box with reduced dimensions to fit in the palms of the hand, with a wristband to hold and/or suspend.

25- The texts showed on the display will be in different idioms, choose by the user at any time, by a screen on the menu.

The user can personalize the

machine by entering your own name and it will always show the date (day/month/year) the weekday and the hours.

Besides the micro-controlled  
05- electronic chip has memory, so it can memorize the point the oration was interrupted and can start at any time, it can memorize the days that the oration was done, or the days that the oration begun.

The machine has controls to  
10- the rolling speed of the text/images on the display, to improve the comfort of the user.

The machine works with options to pray the Rosary or the Third.

Accord with the Diagram 1  
15- enclosed on page 13/15), which represents the blocs of the electronic circuit, the machine is composed:

a) by the display, done on liquid crystal with resolution compatible to the required, text or images;

20- b) by the logical unit interface and arithmetical/display, which interpret to the display the sequential datum of the logic and arithmetical unit and should receive the impulse from the register issued by the buttons and interpret what is the correct sequence

25- in real time to the options Third and Rosary, may have the memory of the last event after turned off on the button on/off.

c) by the register which re-

ceive the impulse signals which emit to the logical and arithmetical unit which will add an account on the Third every time the impulse button were pushed.

The operation is initiates making the option to pray the Third or the Rosary, as Diagram 2 (enclosed as page 14/15).

Choosing the Third the digital or electronic machine follows the sequence of orations as the calendar of real time to select the day of the 10-week (as Diagram 3, enclosed as page 15/15), when the used advance on the orations using a impulse button until the end of the Third.

Choosing the Rosary the digital or electronic machine, follows the sequence of orations of the three Third until the end of the Rosary.

The Digital Rosary has resources as auto power off after three minutes on idle and sound signals, alert, vibration, battery, indicates the day, hour and week, which will be disposed on the display.

To have a clear view of the Digital Rosary, or Electronic Rosary above mentioned, enclosed there is some illustrative draws, on which there is references for proposes of better explanation the detailed description, which follows.

FIGURE 1: Represents the frontal view of themachine, whichh constitute the Digital Rosary, or Electronic Rosary.

FIGURE 2: Represents side

view from the mentioned machine.

FIGURE 3: Represents back view of the machine.

Accord to this illustrations

05- and on its particulars, the Digital Rosary, proposed, is characterized essentially by a micro-controlled electronic chip, having inside recorded a program write to proceed with the function of the Rosary which is controlled by intelligent buttons of command with more than one function to the same button, diffring by the kind of touch applied to same; a quick touch, a long touch, two or more continuous touches, or even with association to another button.

It is doted of memory able to

15- memorize the point that its function is interrupted and make it begins at any time desired by the user, and memorize the days on which its functions were putted in practice or when the same was initialized.

The micro-controlled electro-

20- nic chip has recourses as auto power off after three minutes on idle, memorizing its last position; sound signals to audible information, alarm signals; vibrations; rotative text; images alternating with text; functions of the Rosary; functions of the Third; calendar in real time  
25- (day/month/year/day of the week).

The source of the micro-controlled electronic chip is done by small batteries button kind.

The micro-controlled electronic chip is installed inside a box (1) with reduced dimensions and with a special format and anatomic, to fit and better adjust on the palm of the user's hand.

05- Such box (1) is formed by two parts superior (2) and inferior (3) perfectly adjustable between them. Is doted with a display (4) made of liquid crystal with resolution compatible to the required, through the information will be visualized in text and/or 10-images format.

The information can be sensitive, identified by the mechanic vibrations of the machine. Can also be audible, by the build-in speakers on the box or by headphone means.

15- On the box (1) are located on a easy access position the intelligent command buttons which control the electronic chip and determine the sort of functions of the Digital Rosary, being one counter bottom (5) that, when pushed will change the picture one 20-by one (view on the display); two adjust bottoms + (6) and (7), which determine the way the picture will change by the counter bottom: change to the immediately subsequent (+) or to the immediately precedent (-) picture; and a bottom on/off (8).

25- On the back of the box (1) is the: speaker (9), the output to the headphone (10) and the battery bottom kind cover (12), which supply the electronic circuit of the machine.

The machine has a handle to hold or carry.

Follow will be described as works the Digital Rosary:

05- When turning on the machine will be showed on the display a menu screen, for the users proceed with the initials adjusts, as follows: choose the idiom, adjust the date (day/month/year), adjust the clock (hour), personalize (choose the name), Jaculation 10-(which is an preliminary oration and it is optional and variable that the user can choose among the various offered on the Digital Rosary).

The next sequence of information or pictures viewed on the display refer to the start 15-of the oration. A quick touch on the counter bottom (5), or pushing the + bottom (6) or bottom (7) make appear on the display (4) a message requesting to the user to choose between pray the Rosary or the Third, a slow touch on the counter bottom (5) select the choose, going automatically to this option. The texts and the images start 20-to roll on the display, and using the + (6) and (7) is possible to increase or decrease the speed of the texts and images roll.

The beginning of the Rosary 25-and the Third are identical until the end of the Joyfully Mysteries. The first pictures from the beginning of the oration refer to the followings steps: Sign of the Cross, Offering the Third, Intentions, Creed, Homage to the

Holiness Trinidad, Honor to the God Father, Honor to the God Son, Honor to the Saint Spirit and Glory to the Father.

The following sequence refers to the Joyfully Mystery, where on the first Mystery is the contemplation of the Announcement of San Gabriel Archangel to Virgin Mary. Pray the Lord's Prayer, and ten Hail's Mary, the Glory to the Father and after the Jaculation.

10- On the second Mystery is the contemplation of the Virgin Mary Visit's to her cousin Saint Isabel. Pray the Lord's Prayer, ten Hail Mary, the Glory to the Father and, after, the Jaculation.

15- On the third Mystery is the contemplation of born the Jesus Boy from Belem. Pray the Lord's Prayer, ten Hail Mary, the Glory to the Father and, after, the Jaculation.

20- On the fourth Mystery is the contemplation of the Jesus Boy Introduce on the temple and the Purification of Virgin Mary. Pray the Lord's Prayer, ten Hail Mary, the Glory to the Father and, after, and the Jaculation.

25- On the fifth Mystery is the contemplation of the Lost and Found of the Jesus Boy on the temple. Pray the Lord's Prayer, ten Hail Mary, the Glory to the Father and, after, and the Jaculation.

The account system for the ten Hails Mary is realized by putting a mark (a cross) in

each one of the ten little squares showed on the board on the display.

During the tenth Hail Mary will occur a short vibration on the machine, informing 05- the last. On the end of the sequence from ten Hail Mary and the oration of Glory to the Father will occur a longer vibration, indicating the end of the sequence of the Joyfully Mysteries:

When finishing the oration 10- of the Joyfully Mysteries, the oration of the Third is finished.

On the Rosary option, when finishing the fifth Joyfully Mystery (finishing the first Third) will be started a new routine, just changing the 15- title: Joyfully Mysteries (first Third) changes to Painfully Mysteries (second Third), where on the first Mystery is contemplate the Agony of Jesus Christ Our Savior, when he sweat blood Horto. Pray the Lord's Prayer, ten Hail Mary, the Glory to the Father and then the Jacula-20- tion.

On the second Mystery is the contemplation of the Jesus Christ flagellation tied on the column. Pray the Lord's Prayer, ten Hail Mary, the Glory to the Father and then the Jaculation.

25- On the third Mystery is the contemplation of the prickly coronation of Our Savior. Pray the Lord's Prayer, ten Hail Mary, the Glory to the Father and then the Jaculation.

On the fourth Mystery is the contemplation for the meeting of Jesus with the doctors of the laws on the temple. Pray the Lord's Prayer, ten Hail Mary, the Glory to the Father and then the Jaculation.

On the fifth Mystery is the contemplation of the crucifixion and death of Our Savior Jesus Christ. Pray the Lord's Prayer, ten Hail Mary, the Glory to the Father and then the Jaculation.

10- On the end of the fifth Painfully Mystery (finishing the second Third) will be started a new routine, just changing the title: Painfully Mysteries (second Third) changes to Glorify Mysteries (Third Third), where on the first Mystery is contemplate the Resurrection of Jesus Christ Our Savior. Pray the Lord's Prayer, ten Hail Mary, the Glory to the Father and then the Jaculation.

20- On the second Mystery is the contemplation of the Ascension of Our Savior Jesus Christ. Pray the Lord's Prayer, ten Hail Mary, the Glory to the Father and then the Jaculation.

25- On the third Mystery is the contemplation of the Saint Spirit's Coming under the Apostle's meeting with Saint Mary on Jerusalem. Pray the Lord's Prayer, ten Hail Mary, the Glory to the Father and then the Jaculation.

On the fourth Mystery is the contemplation of the Ascension of Virgin Mary to the

heaven. Pray the Lord's Prayer, ten Hail Mary, the Glory to the Father and then the Jaculation.

On the fifth Mystery is the contemplation of Virgin Mary's Coronation as the Queen  
05- of all the Angels and Saints on heaven. Pray the Lord's Prayer, ten Hail Mary, the Glory to the Father and then the Jaculation.

On the end of the third and last Third (Glorify Mystery) open up the routine of the  
10- Rosary's finishing. Such finishing routine open to the Third option after the end of the first Third (Joyfully Mystery).

The screen sequences on the display show messages to the user gives infinites thanks  
15- to the Sovereign Queen by the benefits received, followed by the oration of Save Queen and the Cross Signal, when a long vibration on the machine indicates the end of the oration and a screensaver is displayed.

This way the Digital Rosary  
20- have on its plenitude the objectives proposed, having all the functions of the Rosary, having own and newness characteristics.

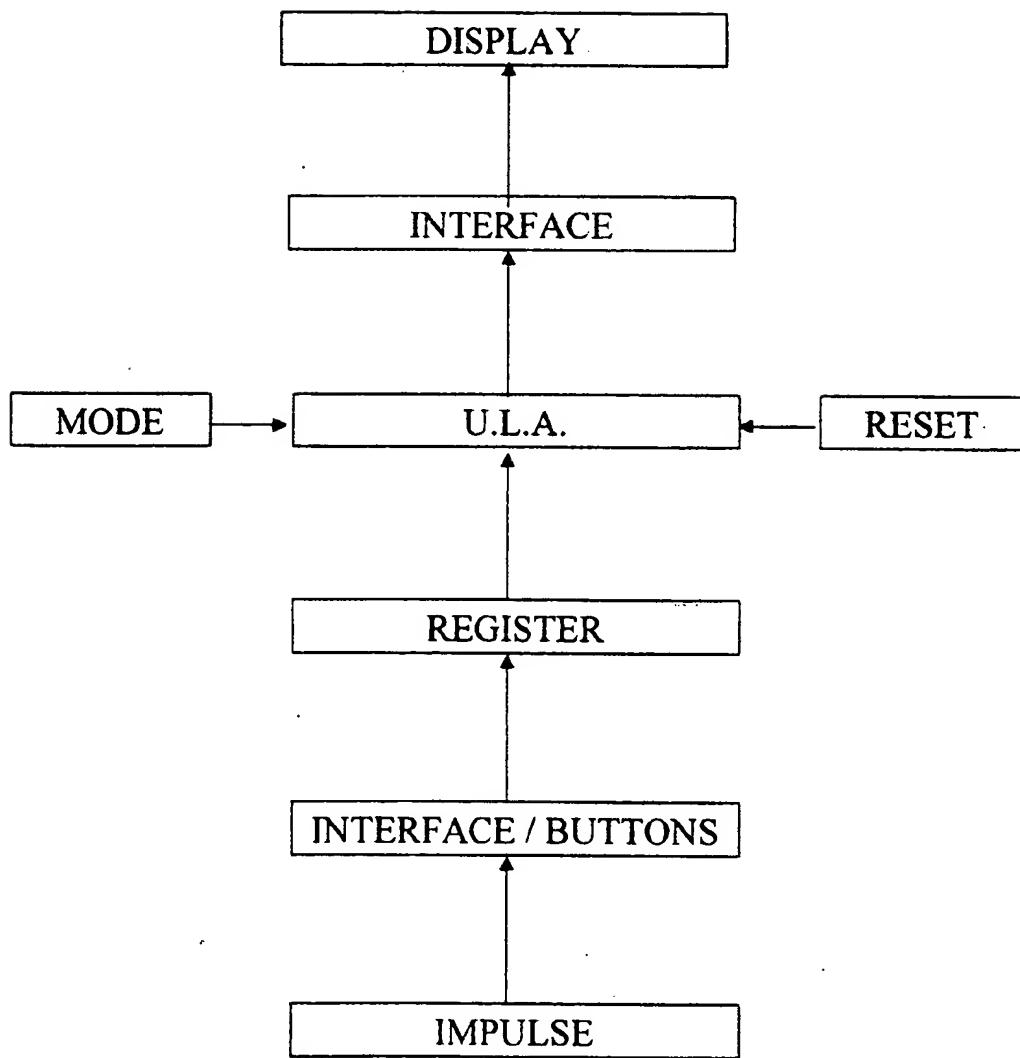


DIAGRAM 1

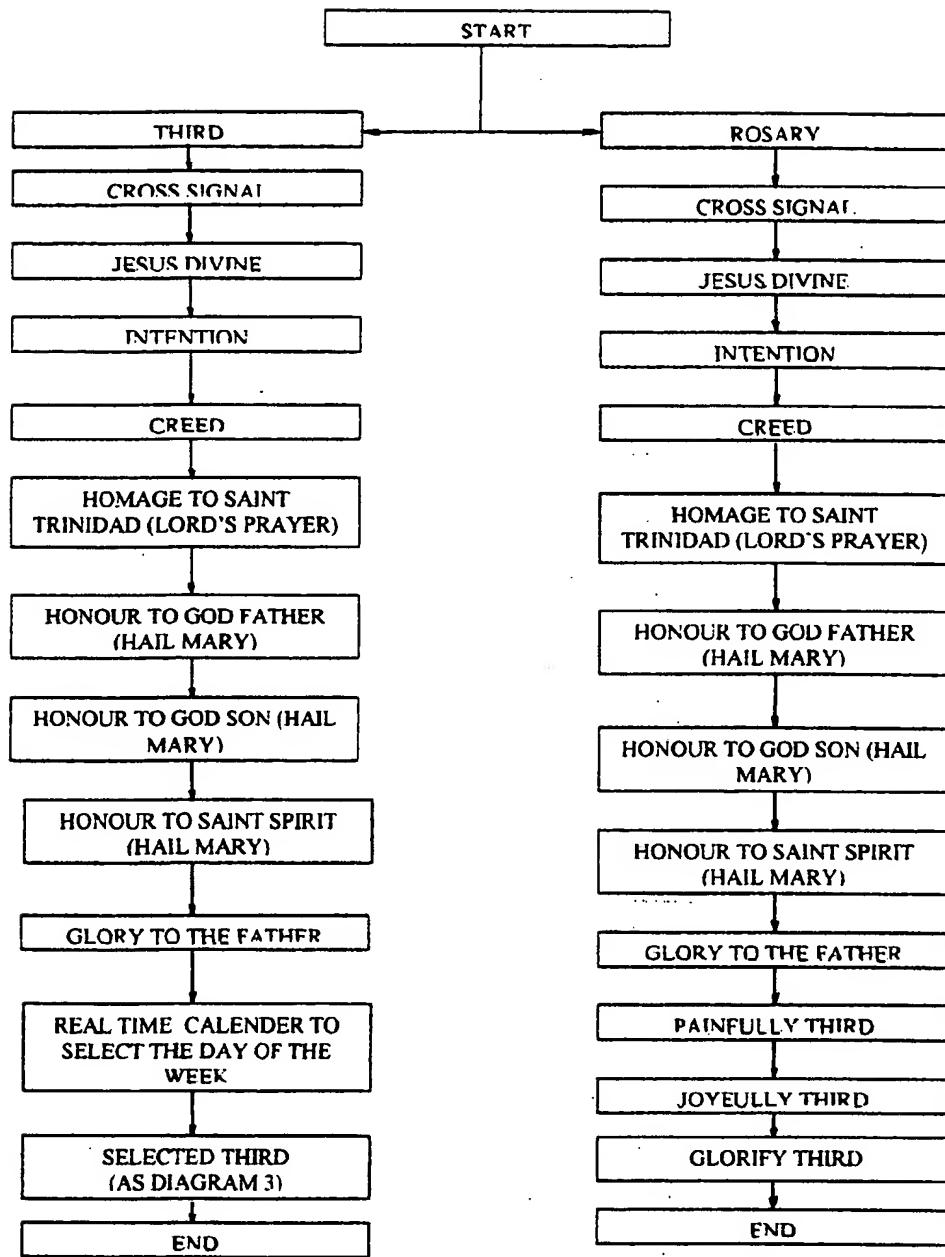


DIAGRAM 2

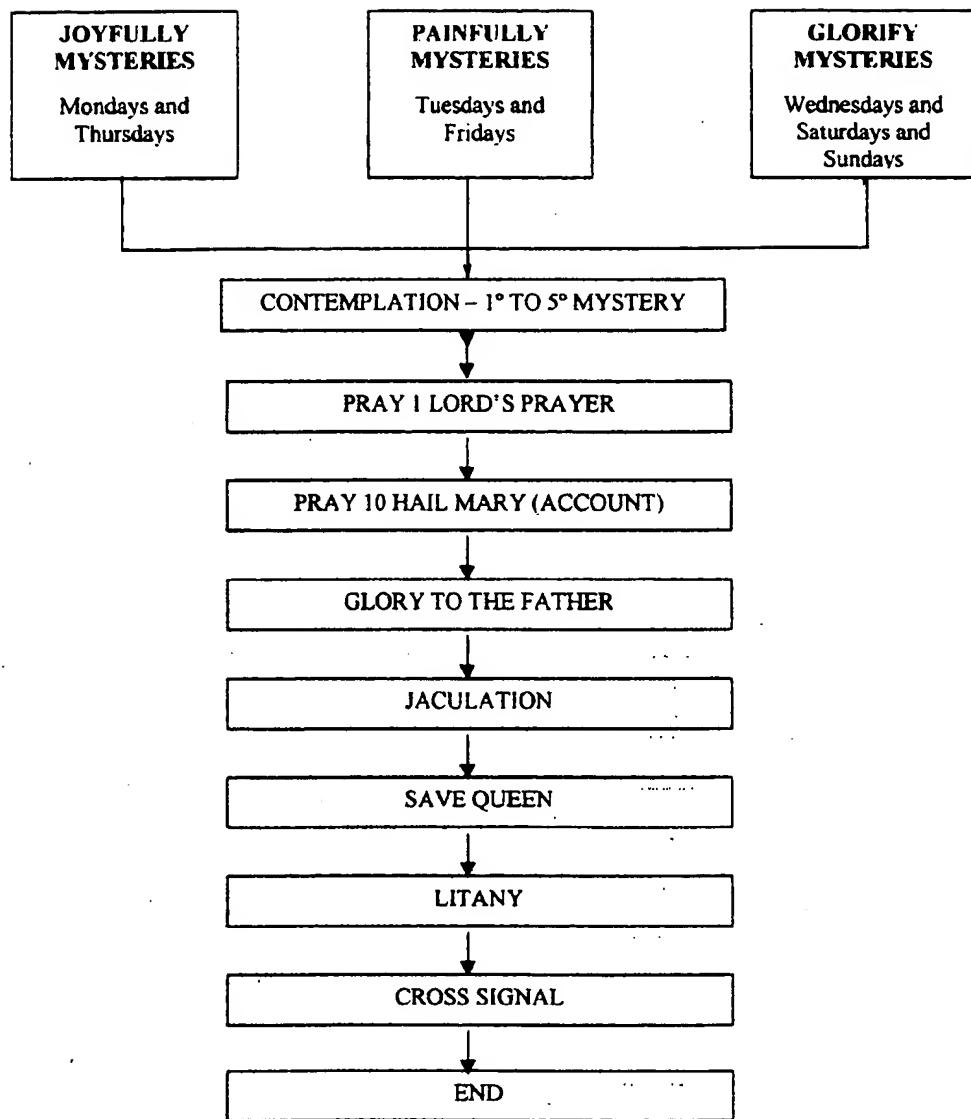


DIAGRAM 3

## R E Q U I R E M E N T S

### 1) " DIGITAL ROSARY ",

is characterized by a electronic micro-controlled chip supplied by a battery button kind, having inside a written  
05- program to perform the Rosary functions, which is controlled by the intelligent command buttons, which one with more then one function, differed by the kind of touch performed to same; and for being doted with memory able to memorize the point where it's functions was stopped and make it return at any time desired by the user, besides memorize the days it's functions were practiced or started.

### 2) " DIGITAL ROSARY ",

accord to requirement 1, characterized by the micro-controlled electronic chip having recourses as auto power off after three minutes on idle, memorizing it's last position; sound signals to audible information, alarm signals, vibrations, rotate text, images alternating with texts, Rosary functions; Third functions; real time calendar  
20- (day/month/year/day of the week).

### 3)." DIGITAL ROSARY ",

accord to requirement 1, characterized by the micro-controlled electronic chip be installed inside a box (1) of reduced dimensions with anatomic and special format and  
25- with an handle to hold, formed by two parts superior (2) and inferior (3) adjusted between then having a display (4) in liquid crystal, with resolution compatible to required, by this the information will be viewed in texts

and/or images.

4) "**DIGITAL ROSARY**", accord to the requirement 1, characterized by being located on box (1) the intelligent command buttons which  
05- controls the electronic chip which determines the various functions of the Digital Rosary being a controller button (5) to change the pictures one by one, on the display and two adjusts buttons + (6) and (7) which define the direction of the changes by the counter button; and by having  
10- located on the back of the box (1) the speaker (9) and the output to headphones (10) and the access cover (11) to hold the little batteries button kind (12) which supply the electronic circuit of the machine...

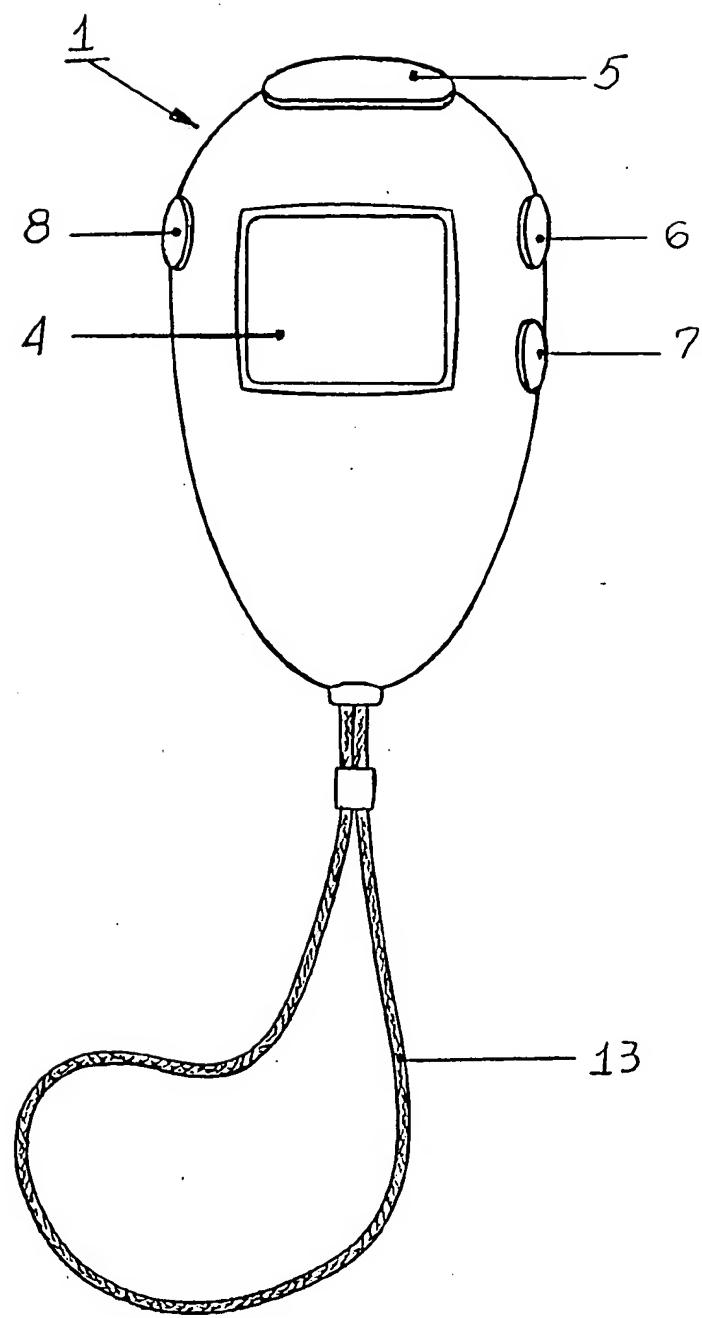


FIG. 1

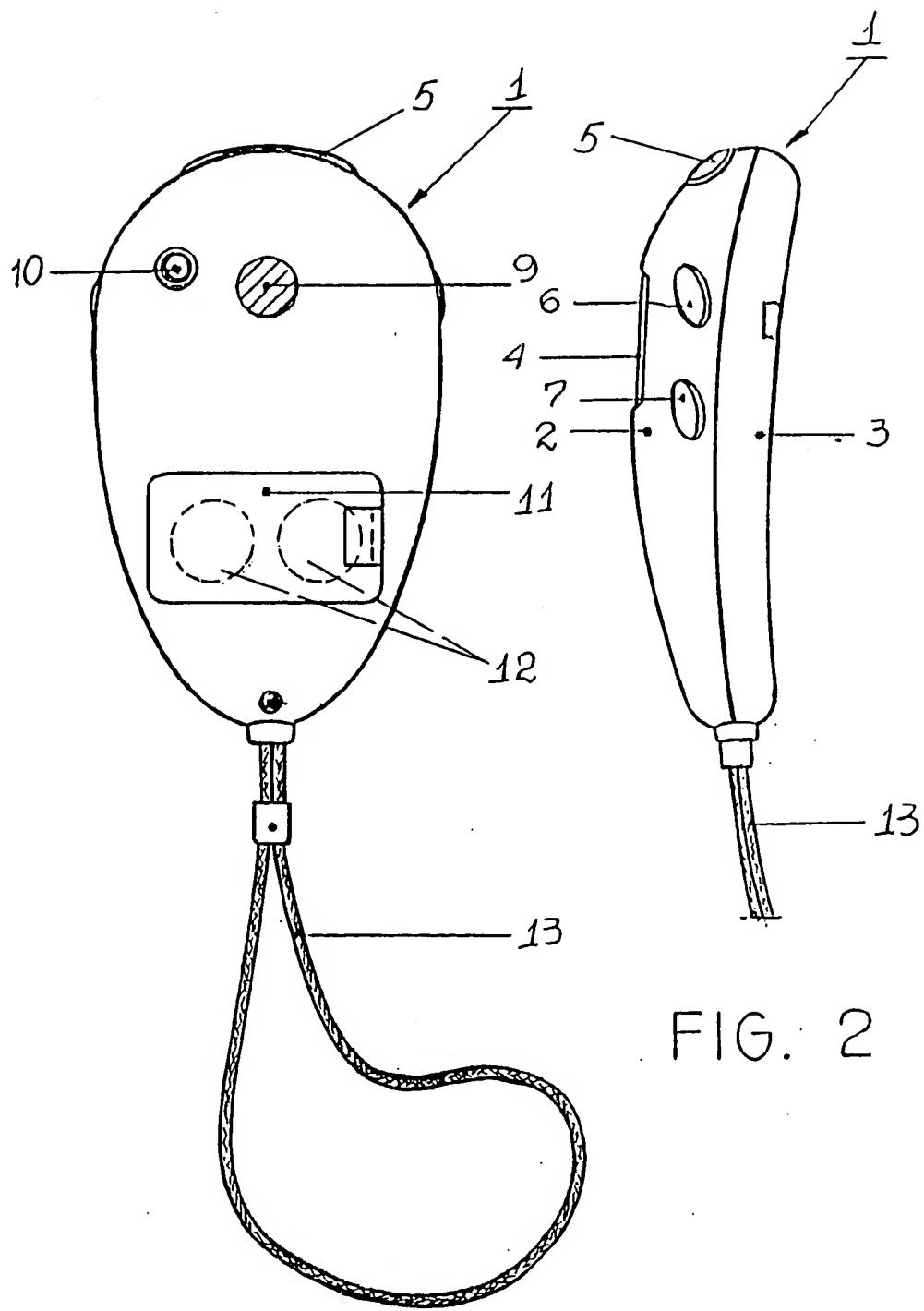


FIG. 3



# INTERNATIONAL SEARCH REPORT

International application No.

PCT/BR00/00104

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G08B 21/00  
US CL : 340/540

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 340/384.7, 540, 573.1, 691.1, 691.2, 691.4, 691.6, 693.5; 341/20, 22

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EAST, EPO, JPO, DERWENT

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y, P	US 4,365,246 A (DEWOLF et al.), 21 December 1982, see Abstract and Figs. 1-6.	1-4
Y, P	US 4,601,584 A (DEWOLF et al.), 22 July 1986, see Abstract and Figs. 1-13.	1-4
A, P	US 4,647,276 A (SMOCZYNSKI) 03 March 1987, see Abstract and Figure.	1-4
Y, P	US 5,505,622 A (BOSMANI) 09 April 1996, see Abstract and Figs. 1-3.	1-4
Y, P	FR2,515,949 A (DELENATTE) 13 May 1983, see Abstract and Figures.	1-4

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent published on or after the international filing date
- "L" document which may throw doubt on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

08 February 2001 (08.02.2001)

Date of mailing of the international search report

30 APR 2001

Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231  
Facsimile No. (703)305-3230

Authorized officer

Daniel J Wu

Telephone No. (703) 308-6730

Form PCT/ISA/210 (second sheet) (July 1998)

